

Please amend the application as follows:

In the Claims

Please amend Claims 1-9, 12-13, 20-21, 23, 32, 37-38, 50, and 57.

1. (Amended) A system for converting sensed force or mechanical motion into corresponding electrical signals, comprising:
- a sensor providing an electrical signal as a function of sensed force or mechanical motion;
  - an electronic circuit (i) electrically coupled to the sensor to receive the electrical signal as an input and (ii) including at least two channels each including a filter to filter the received electrical signal and provide respective corresponding electrical signals as outputs, at least one of said at least two channels essentially directly coupled to the sensor.
2. (Amended) The system as claimed in Claim 1, wherein said at least one of said at least two channels includes a low-pass filter and the other of said at least two channels includes a high-pass filter.
3. (Amended) The system as claimed in Claim 2, wherein the low-pass filter passes frequencies in a linear region of the sensor and the high-pass filter passes a resonance frequency of the sensor.
4. (Amended) The system as claimed in Claim 1, wherein said at least two channels further include an amplifier to amplify the electrical signal.
5. (Amended) The system as claimed in Claim 1, wherein said at least two channels further include an amplifier and offset circuit to amplify and offset the electrical signal.

A1  
Corrected

- A1  
end
6. (Amended) The system as claimed in Claim 1, wherein inputs to said at least two channels are electrically isolated from one another.
7. (Amended) The system as claimed in Claim 1, wherein the electronic circuit further includes a buffer to isolate the inputs of said at least two channels from one another.
8. (Amended) The system as claimed in Claim 7, wherein the buffer is electrically disposed between the sensor and at least one of the channels.
9. (Amended) The system as claimed in Claim 8, further including at least one high impedance element to provide the output electrical characteristics of the sensor to channels not coupled directly to the sensor.
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- A2
12. (Amended) The system as claimed in Claim 7, wherein one of the channels includes a low-pass filter and power is supplied to the buffer by the output of the low-pass filter.
13. (Amended) The system as claimed in Claim 1, wherein the channels have an input impedance greater than 10 Mohm.
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- A3
20. (Amended) The system as claimed in Claim 1, wherein channels include a passive low-pass filter circuit.
21. (Amended) The system as claimed in Claim 1, wherein at least one of the channels includes a passive high-pass filter circuit.
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cont'd
23. (Amended) A method for converting sensed force or mechanical motion into corresponding electrical signals, comprising:
- providing an electrical signal as a function of sensed force or mechanical motion;
  - channelizing the electrical signal into at least a first channel and a second channel
  - filtering the electrical signal into a first frequency band and a second frequency band

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respectively, the channelizing including essentially directly channelizing the electrical signal into at least one of the channels; and

outputting the electrical signal in the first frequency band and the second frequency band independently.

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32. (Amended) The method as claimed in Claim 23, wherein said filtering the electrical signal includes an impedance greater than 10 Mohm for sensing the electrical signal.

37. (Amended) A system for converting sensed force or mechanical motion into corresponding electrical signals, comprising:

means for providing an electrical signal as a function of sensed force or mechanical motion; and

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means for channelizing said electrical signal into at least two channels including means for filtering the electrical signal, said means for channelizing including essentially directly channelizing said electrical signal into at least one of said two channels.

38. (Amended) An electronic circuit for processing an electrical signal corresponding to a sensed force or mechanical motion, comprising:

a circuit input, to receive an electrical signal corresponding to the sensed force or mechanical motion; and

at least two filter modules coupled to the circuit input to filter the electrical signal and provide respective filtered electrical signals on respective circuit outputs, at least one of said at least two filter modules being essentially directly coupled to the circuit input.

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50. (Amended) The electronic circuit as claimed in Claim 38, wherein at least one of said at least two filter modules has an input impedance greater than 10 Mohm.

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57. (Amended) The electrical circuit as claimed in Claim 38, wherein at least one of said at least two filter modules includes a passive high-pass filter circuit.